

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method of processing green Cicer beans, the method comprising:
separating green Cicer beans from harvested green Cicer bean product;
cleaning said green Cicer beans;
preserving said green Cicer beans;
grading said green Cicer beans according to predetermined criteria; and
packaging said green Cicer beans.
2. The method of Claim 1, wherein preserving said green Cicer beans comprises blanching said green Cicer beans at a predetermined temperature and for a predetermined dwell time.
3. The method of Claim 2, wherein blanching said green Cicer beans further comprises testing for enzyme activity after blanching and adjusting said predetermined temperature during blanching based on enzyme activity.
4. The method of Claim 2, wherein blanching said green Cicer beans comprises testing for enzyme activity after blanching and adjusting said predetermined dwell time during blanching according to enzyme activity.
5. The method of Claim 2, wherein said predetermined dwell time is between 1 and 5 minutes and said predetermined temperature is between 90°F and 210°F.
6. The method of Claim 2, wherein the predetermined dwell time is between 190°F and 195°F for a dwell time of 3 minutes.
7. The method of Claim 1, wherein preserving said green Cicer beans comprises freezing said green Cicer beans.
8. The method of Claim 1, wherein preserving said green Cicer beans comprises dehydrating said green Cicer beans.
9. The method of Claim 1, wherein the predetermined criteria for grading said green Cicer beans is consumer-specified criteria.

10. The method of Claim 1, wherein said green Cicer beans are packaged for sale according to grade.

11. The method of Claim 1, wherein separating green Cicer beans from harvested green Cicer bean product comprises:

collecting data regarding the relative sizes of said green Cicer beans; and
filtering harvested green Cicer bean product to separate green Cicer beans of at least a predetermined size from the harvested green Cicer bean product.

12. The method of Claim 1, wherein cleaning said green Cicer beans comprises:

collecting said green Cicer beans in a body of water; and
removing any material floating on said body of water.

13. The method of Claim 12, further comprising repeating the elements of Claim 1 for said removed material.

14. A method of processing green Cicer beans comprising:
delivering harvested green Cicer bean product;
filtering said harvested green Cicer bean product through a vibrating screen to remove depodded green Cicer beans from said harvested green Cicer bean product;

cleaning said depodded green Cicer beans;
preserving said depodded green Cicer beans; and
grading said depodded green Cicer beans according to predetermined criteria.

15. The method of Claim 14, further comprising collecting size data for depodded green Cicer beans.

16. The method of Claim 15, wherein filtering said harvested green Cicer bean product comprises adjusting said vibrating screen according to the collected size data.

17. The method of Claim 14, wherein cleaning said depodded green Cicer beans comprises:

depositing said depodded green Cicer beans in a body of water; and
removing any material floating on the body of water, wherein said floating material may include podded green Cicer beans.

18. The method of Claim 17, further comprising depodding said podded green Cicer beans.

19. The method of Claim 17, further comprising repeating the elements of Claim 15 for said depodded green Cicer beans.

20. The method of Claim 14, wherein preserving said depodded green Cicer beans comprises dehydrating said depodded green Cicer beans.

21. The method of Claim 20, wherein said depodded green Cicer beans are dehydrated with initial temperatures ranging between 120°F and 190°F and final temperatures ranging between 120°F and 190°F with a dwell time between 2 and 10 hours.

22. The method of Claim 20, wherein said depodded green Cicer beans are dehydrated to a final moisture content between 1% and 10%.

23. The method of Claim 20, wherein said depodded green Cicer beans are dehydrated to approximately 12% of an initial product green weight.

24. The method of Claim 14, wherein preserving said depodded green Cicer beans comprises freezing said depodded green Cicer beans.

25. The method of Claim 14, wherein preserving said depodded green Cicer beans comprises blanching said depodded green Cicer beans.

26. A system for processing green Cicer beans comprising:
a first processing line comprising:
an adjustable screen for filtering green Cicer bean product to remove unwanted material from harvested green Cicer bean product;
a transporter for transporting said green Cicer bean product to said adjustable screen; and

a cleaning station positioned in sufficient proximity to the adjustable screen to receive filtered green Cicer bean product and clean the filtered green Cicer bean product.

27. The system of Claim 26, wherein said cleaning station comprises at least one floatation washer.

28. The system of Claim 27, wherein said cleaning station further comprises a container through which water flows and delivers filtered green Cicer bean product to the flotation washer, in which podded green Cicer bean product is separated from said filtered green Cicer bean product.

29. The system of Claim 26, wherein said primary processing line further comprises a machine vision device positioned in sufficient proximity to said transporter to read size data from said green Cicer bean product.

30. The system of Claim 29, wherein said adjustable screen is adjusted in accordance with said size data.

31. The system of Claim 26, wherein said adjustable screen comprises a plurality of louvered elements.

32. The system of Claim 31, wherein each of said louvered elements has an upper end and a lower end, and wherein at least one of said louvered elements has an angled edge at the upper end.

33. The system of Claim 26, wherein said adjustable screen is adapted to vibrate at a pre-determined vibration rate.

34. The system of Claim 28, further comprising a secondary processing line positioned in sufficient proximity to said primary processing line to receive unwanted material for further processing.

35. The system of Claim 34, wherein said secondary processing line comprises a de-podder for depodding green Cicer beans from podded green Cicer bean product.

36. An apparatus for processing green vegetable, the apparatus comprising an adjustable screen having a plurality of louvers, wherein said plurality of louvers are selectively adjusted based on the relative sizes of the green vegetables to be processed so that green vegetables of a predetermined size are allowed to pass through said plurality of louvers.

37. The apparatus of Claim 37, wherein said adjustable screen has a top and bottom side, said top side being the side which receives said green vegetables to be processed.

38. The apparatus of Claim 37, wherein at least one of said plurality of louvers has at least one angled edge on said top side of the adjustable screen.

39. The apparatus of Claim 37, wherein at least one of said plurality of louvers is serrated on said top side of the adjustable screen.

40. The apparatus of Claim 37, wherein said adjustable screen further comprises a vibrator adapted to vibrate said adjustable screen at a pre-determined vibration rate.

41. A method for processing green Cicer beans comprising:
filtering harvested green Cicer bean product through an adjustable screen, wherein said adjustable screen has a plurality of spaced louvers, and wherein said plurality of louvers are selectively adjusted based on the relative sizes of the green Cicer beans to be processed.

42. The method of Claim 41, further comprising vibrating said adjustable screen at a predetermined vibration rate.

43. The method of Claim 41, further comprising:
collecting data regarding the relative sizes of the green Cicer beans to be processed prior to filtering the harvested green Cicer bean product through the adjustable screen; and
selectively adjusting said adjustable screen based on said data.

44. The method of Claim 41, further comprising:

collecting data regarding the relative sizes of the green Cicer beans to be processed during filtering of the harvested green Cicer bean product through the adjustable screen; and

selectively adjusting said adjustable screen based on said data.